

Mahdi Taherahmadi

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M.Sc. STUDENT, COMPUTING SCIENCE, SIMON FRASER UNIVERSITY, BC, CANADA

RESEARCH INTERESTS

Embodied AI, 3D Scene Understanding, Human-Robot Interaction, Representation Learning,
Multi-Modal Learning, Offline Reinforcement Learning

EDUCATION

Simon Fraser University, British Columbia, Canada

M.Sc, Computing Science - **CGPA: 3.93**

Sept' 19 - June' 22

Thesis: Navigational Intent, Emotion And Disengagement Prediction In Human-Robot Interactions.

Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran

B.Sc, Computer Engineering.

July' 13 - July' 18

Thesis: Design And Implementation Of An Embedded Deep Learning Based Advanced Driver-Assistance Systems (ADAS).

RESEARCH EXPERIENCE & PROJECTS

Computer Vision Research Intern - **WRNCH AI**

- Multi-Person 3D Human Pose Estimation from Monocular RGB

Spet '21 - Present

Research Assistant - **ROSIE Lab**

- Learning the Effect of Robot Action and Context on Human Positivity in Real-Time Human Interactions using Sequential Multi-modal Autoencoders

Supervisor: Prof. Angelica Lim

Apr '20 - Spet '21

Research Assistant - **MARS Lab**

- Optimal Control Inspired Probabilistic Model-Based Human Navigational Intent Inference

Supervisor: Prof. Mo Chen

Aug '19 - Spet '21

Data Analyst - **Rahnema Co.**

- RDMA Big Data R&D Team

Jan '18 - Mar '19

Research Intern - **AIRLab** - Polytechnic University of Milan

- Simulation and Evaluation of Realistic Wireless Communication in Multi-Robot Scenarios

Supervisor: Prof. F.Amigoni

May '17 - Spet '17

Research Assistant - **Cognitive Robotics Lab** - AUT

- Vision-based Advanced Driver Assistance System(ADAS)

BSc Thesis - Supervisor: Dr. Shiry

Oct '16

- Victim Detection and 3D Pose Estimation from 2D Images for a Rescue Robot

Supervisor: Dr. Shiry

Nov '16

- RoboCup Rescue Simulation League Base Code

Team SOS VR, Supervisor: Dr. Shiry

Spet '16

PUBLICATIONS	<p>TaherAhmadi M, Gonzalez-Garcia A. "Single-Shot Multi-Person 3D Pose Estimation From Monocular RGB With Transformers". (Under preparation).</p> <p>TaherAhmadi M, Chen M, Lim A. "Disengagement Prediction in Real-Time Human Interactions using Hierarchical Recurrent Neural Networks". (Under preparation).</p> <p>TaherAhmadi M, Agand P, Chen M, Lim A. "Optimal Control Inspired Probabilistic Model-Based Human Navigational Intent Inference". <i>The International Conference on Robotics and Automation. ICRA.</i> 2022(Under Review).</p> <p>Zhang Z, Rhim J, TaherAhmadi M, Yang K, Lim A, Chen M. "SFU-store-nav: A multimodal dataset for indoor human navigation". <i>Data in Brief.</i> 2020 Dec 1;33:106539.</p>	
AWARDS & ACHIEVEMENTS	<p>Computing Graduate Fellowship - Simon Fraser University Jan '20</p> <p>3rd Place - FIRA RoboWorld Cup 2018 Aug '18</p> <p>- Team MCS, Simurosot - Miro Middle, Taichung, Taiwan</p> <p>3rd Place - FIRA RoboWorld Cup 2018 Aug '18</p> <p>- Team MCS, Simurosot - RoboChallenge, Taichung, Taiwan</p> <p>13th Place out of 100 teams - AUTDMC 2017 Nov '17</p> <p>- Amirkabir Data Mining Cup 2017, Tehran, Iran</p> <p>2nd Place - RoboCup 2017 July '17</p> <p>- Team SOS VR, Rescue Simulation Virtual Robot league, Nagoya, Japan</p> <p>1st Place - RoboCup IranOpen 2017 Apr '17</p> <p>- Team SOS VR, Rescue Simulation Virtual Robot league, Tehran, Iran</p> <p>9th Place out of 60 Teams - Sharif Programming Marathon 2016 Sept '16</p> <p>- Magnet: The Localized Shopping Recommender System using PredictionIO Platform, Sharif University of Technology, Tehran, Iran</p> <p>3rd Place - RoboCup 2016 July '16</p> <p>- Team SOS VR, Rescue Simulation Virtual Robot league, RoboCup 2016, Leipzig, Germany</p> <p>3rd Place - RoboCup 2015 July '15</p> <p>- Teen size humanoid soccer league, RoboCup 2015, Hefei, China</p> <p>Top 0.03% - among more than 300,000 participants July '13</p> <p>- Nation-wide University Entry Exam</p>	
TEACHING EXPERIENCE	<p>Computing Science, Simon Fraser University:</p> <p>- Teaching Assistant - Affective Computing - Dr. Angelica Lim summer '20</p> <p>Computer Engineering, Amirkabir University of technology:</p> <p>- Teaching Assistant - Linear Algebra and its Applications - Dr. Ehsan Nazerfard spring '17</p> <p>- Teaching Assistant - Principles of Programming Languages(C) - Dr. Shiry Fall '16</p> <p>- Teaching Assistant - Engineering Statistics - Dr. AmirHaery Spring '16</p> <p>- Teaching Assistant - Discrete Structures - Dr. Fallah Spring '16</p> <p>- Teaching Assistant - Data Structures & Algorithms - Dr. Dehghan Fall '15</p> <p>- Teaching Assistant - Principles of Programming Languages(C) - Dr. Shiry Fall '15</p> <p>- Teaching Assistant - Advanced Programming (JAVA) - Dr. Pourvatan Spring '15</p> <p>- Teaching Assistant - Principles of Programming Languages(C) - Dr. Shiry Fall '14</p> <p>Medical Engineering, Amirkabir University of technology:</p> <p>- Teaching Assistant - Robotics - Dr. AhmadiPajouh Fall '15</p>	
NOTABLE COURSEWORK PROJECTS	<p>Leveraging Adversarial training for Depth Estimation - Machine Learning Fall '19</p> <p>Power Usage Data Time Series Analysis - Statistical Machine Learning Fall '16</p> <p>Face Recognition Using SVD - Advanced Engineering Mathematics Fall '16</p> <p>Graph Based Motion Planner - Design Algorithm Spring '15</p>	

WORK EXPERIENCE	Data Engineer - Python, Scikit-learn, Pandas, Plotly Dash, Flask, Apache Airflow, Apache Spark, Oracle DB, MongoDB <i>Jan '18 - Jul '19</i> - <i>Rahnema Company</i> , Beheshti ave, Tehran, Iran. Back-End Developer - Python, JS, PHP, Symfony, Git, Redmine <i>July '15 - Oct '16</i> - <i>ZoodFood Company, IIG</i> (Iran Internet Group), Vanak sq, Tehran, Iran. Software Developer - Java, MySql, HTML, CSS, Illustrator, Git <i>Aug '13 - Dec '14</i> - <i>RAPNA</i> , Roshd Science & Technology Center, Tehran, Iran.
TECHNICAL SKILLS	Languages: C, C++, Qt, Java, Python, Matlab, Bash, JS, Assembly, CUDA Database Systems: MySQL, SQL Server, Oracle DB, MongoDB Frameworks, Operating Systems, and Scientific libraries: Linux, ROS, Git, Docker, OpenCV, Weka, Spark, Pandas, Scikit-learn, pgmpy Proficient in PyTorch, Tensorflow and Keras
TALKS & PRESENTATIONS	Invited Talk: View Synthesis and NeRFs - <i>Roise Lab</i> <i>Jul '21</i> Guest lecturer on Generative Adversarial Networks - <i>Affective Computing</i> <i>Aug '20</i> Lecturer at CEIT Robotic Summer School - <i>Introduction to ROS</i> <i>June '17</i> Presenter at 9th Linux Festival - <i>Introduction to Virtual Robot</i> <i>May '17</i> Presenter at 8th Linux Fest - <i>Introduction to Cuda, Caffé, ROS & Docker</i> <i>May '16</i>
VOLUNTEER EXPERIENCE & POSITION OF RESPONSIBILITY	Technical Committee of RoboCup AsiaPacific 2018 - Virtual Robot Rescue <i>Dec '18</i> Technical Committee of RoboCup IranOpen 2018 - Virtual Robot Rescue <i>Apr '18</i> Technical Committee of RoboCup IranOpen 2017 - Virtual Robot Rescue <i>Apr '17</i> Leader of Team SOS VR - RoboCup Rescue, Virtual Robot Competition. <i>July '16</i> Member of 7th, 8th & 9th Linux Fest Organization team <i>May '16</i> Director of Cognitive Robotics Lab - Computer Engineering department <i>July '15</i> Coach and Captain of Faculty Football team - Computer Engineering department <i>Sept '14</i> Chief Editor of 0&1 magazine - <i>CEIT Students Scientific Chapter</i> <i>Oct '14</i> Editor at Pouyesh magazine - <i>CEIT students association</i> <i>Sept '13</i>
LANGUAGES	English (<i>Fluent</i>), Persian (<i>Native</i>), Azerbaijani (<i>Native</i>), Arabic (<i>Fair</i>)
REFERENCES	Mo Chen - Assistant Professor - School of Computing Science, Simon Fraser University - mochen@cs.sfu.ca - Home Page Angelica Lim - Assistant Professor - School of Computing Science, Simon Fraser University - angelica@rosielab.ca - Home Page Abel Gonzalez Garcia - Research Scientist - Hinge Health Co. - abel.gonzalezgarcia@hingehealth.com - Linkedin Saeed Shiry - Assistant Professor - School of Digital, Technologies and Arts, Staffordshire University - saeed.shiryghidary@staffs.ac.uk - Home Page Francesco Amigoni - Associate Professor - Department of Electronics, Information and Bioengineering, Polytechnic of Milan - francesco.amigoni@polimi.it - Home Page